DW DIGITAL WATCHDOG®
Complete Surveillance Solutions

Analog High Definition Bullet Camera

DWC-B6763WTIR

DWC-B6763WTIR650

STAR-LIGHT AHD™ Analog High Definition

ABOUT MANUAL

Before installing and using the camera, please read this manual carefully.
Be sure to keep it handy for future reference.

05/2015

PRECAUTIONS

- Do not open or modify.
- Do not open the case except during maintenence and installation, for it may be dangerous and can cause damages.
- Do not put objects into the unit.
- Keep metal objects and flammable substances from entering the camera. It can cause fire, short-circuits, or other damages.
- Be careful when handling the unit.
- To prevent damages, do not drop the camera or subject it to shock or vibration.
- Do not install near electric or magnetic fields.
- Protect from humidity and dust.
- Protect from high temperature.
- Be careful when installing near the ceiling of a kitchen or a boiler room, as the temperature may rise to high levels.
- Cleaning:
  To remove dirt from the case, moisten a soft cloth with a soft detergent solution and wipe.
- Mounting Surface:
  The material of the mounting surface must be strong enough to support the camera.

FCC COMPLIANCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference, when the equipment is operated in a residential environment. This equipment generates, uses, and radiates radio frequency energy; and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications.

WARNING: Changes or modifications are not expressly approved by the manufacturer.

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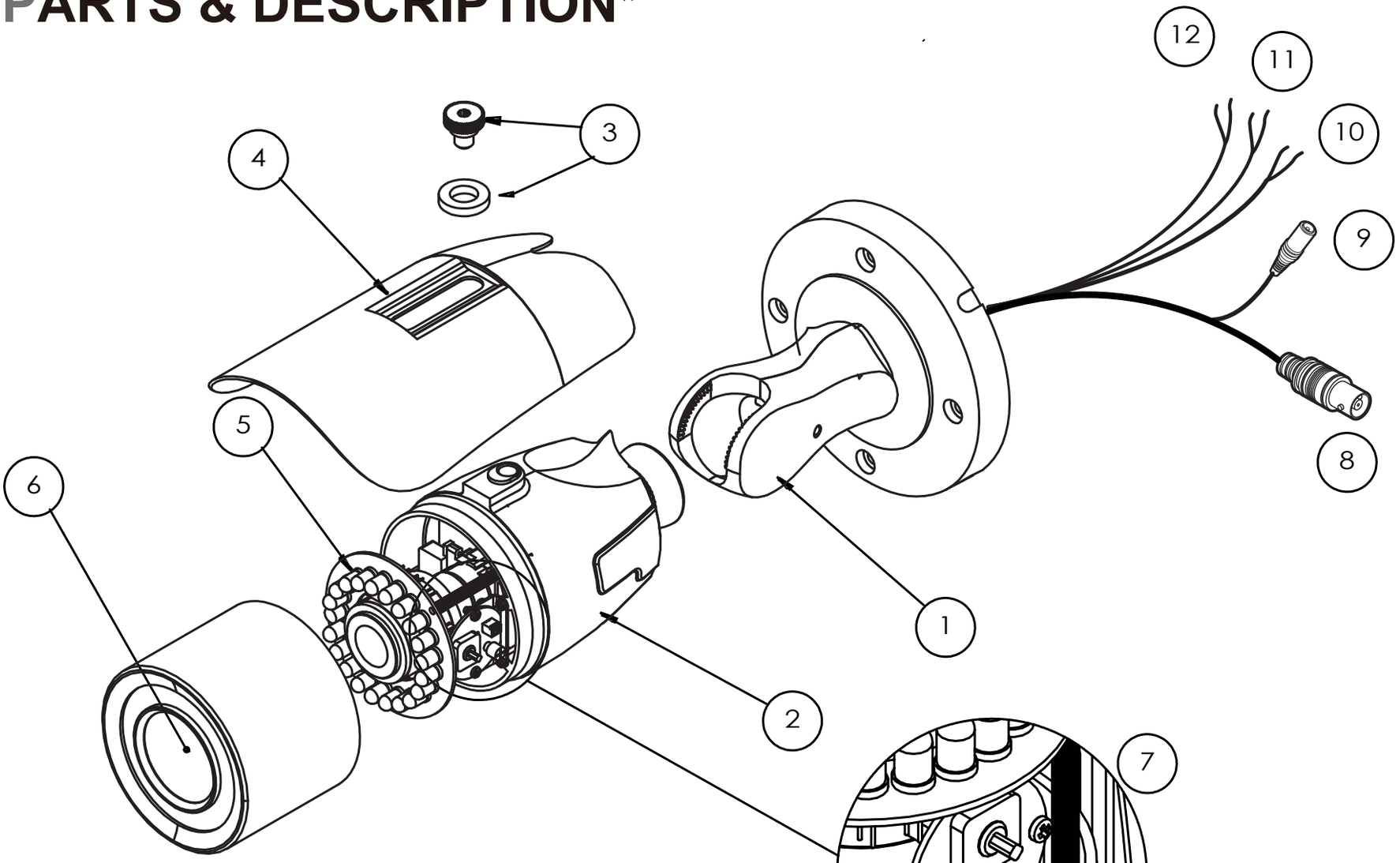
FEATURES*

- Analog High Definition (AHD) HD over Coax Technology
- STAR-LIGHT™ Super Low Light Technology
- Panasonic 1/3" CMOS Sensor
- 1080P Resolution at 30fps
- Wide Dynamic Range (WDR)
- Varifocal P-Iris Lens from 2.8~12mm [DWC-B6763WTIR Models]
- Varifocal P-Iris Lens from 6~50mm [DWC-B6763WTIR650 Models]
- Smart IR™ with Intelligent Camera Sync. 100-150ft Range
- Smart DNR™ 3D Digital Noise Reduction
- Highlight Masking Exposure (HME)
- True Day/Night Mechanical IR Cut Filter
- Auto Sensing 24VAC/12VDC with Line Lock
- Secondary Video-BNC Output (While UTP in use)
- Easy Icon Driven OSD Menu with Built-in Joystick
- Programmable Privacy Zones
- Auto Gain Control (AGC)
- Back Light Compensation (BLC)
- Dynamic Range Compressor (DRC) Reveals Low Light Detail
- Auto White Balance (AWB)
- RS-485 Built-in
- IP66 Certified (Weather Resistant)

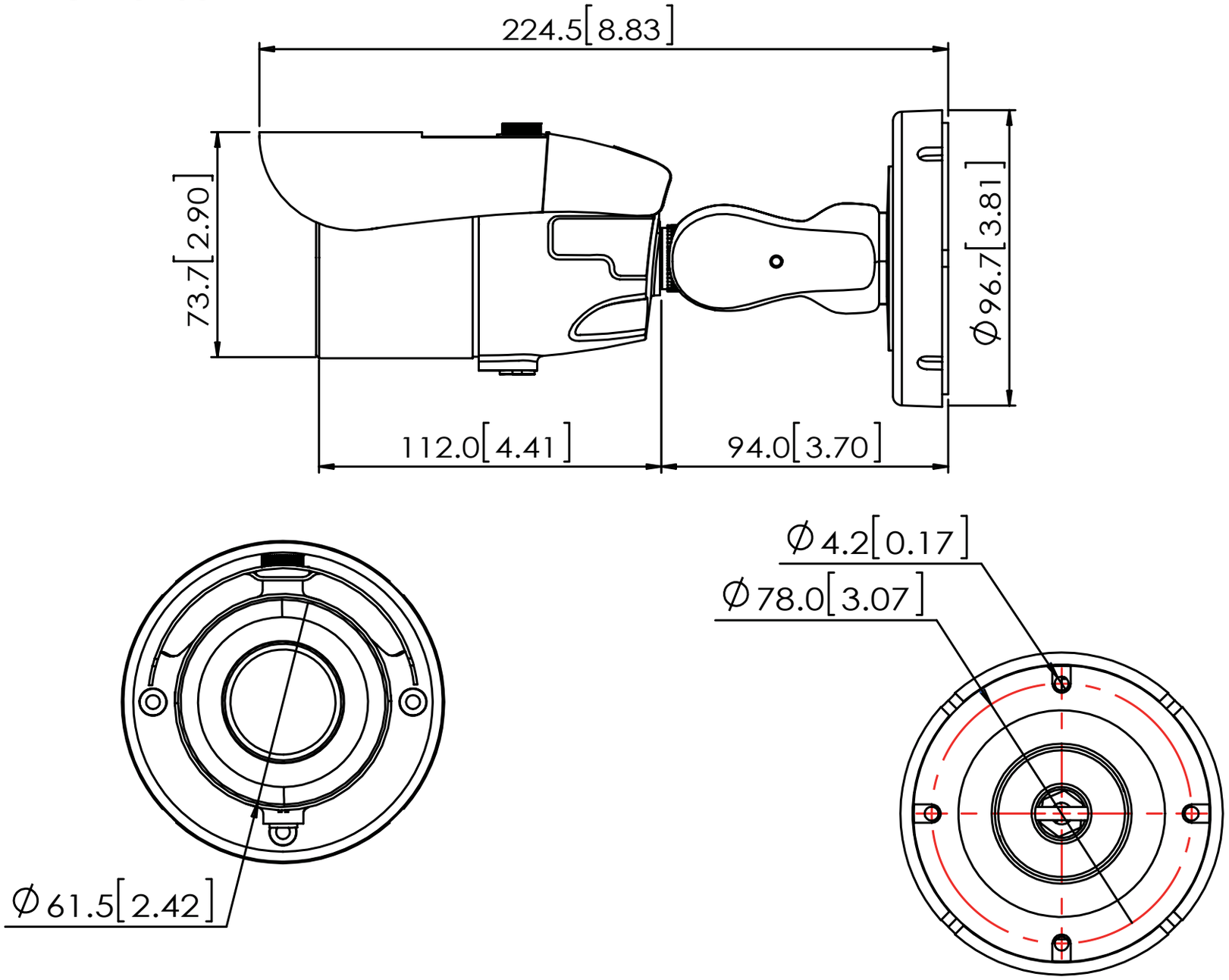
PARTS & DESCRIPTION*



1. Mounting Bracket
2. Camera Module
3. Sunshield Adjusting Screws
4. Sunshield Cover
5. IR Module
6. Front Case
7. OSD Joystick Controller
8. BNC Cable
9. 12VDC Power Outlet
10. RS485 Cable
11. UTP Cable
12. Alarm Output Cable

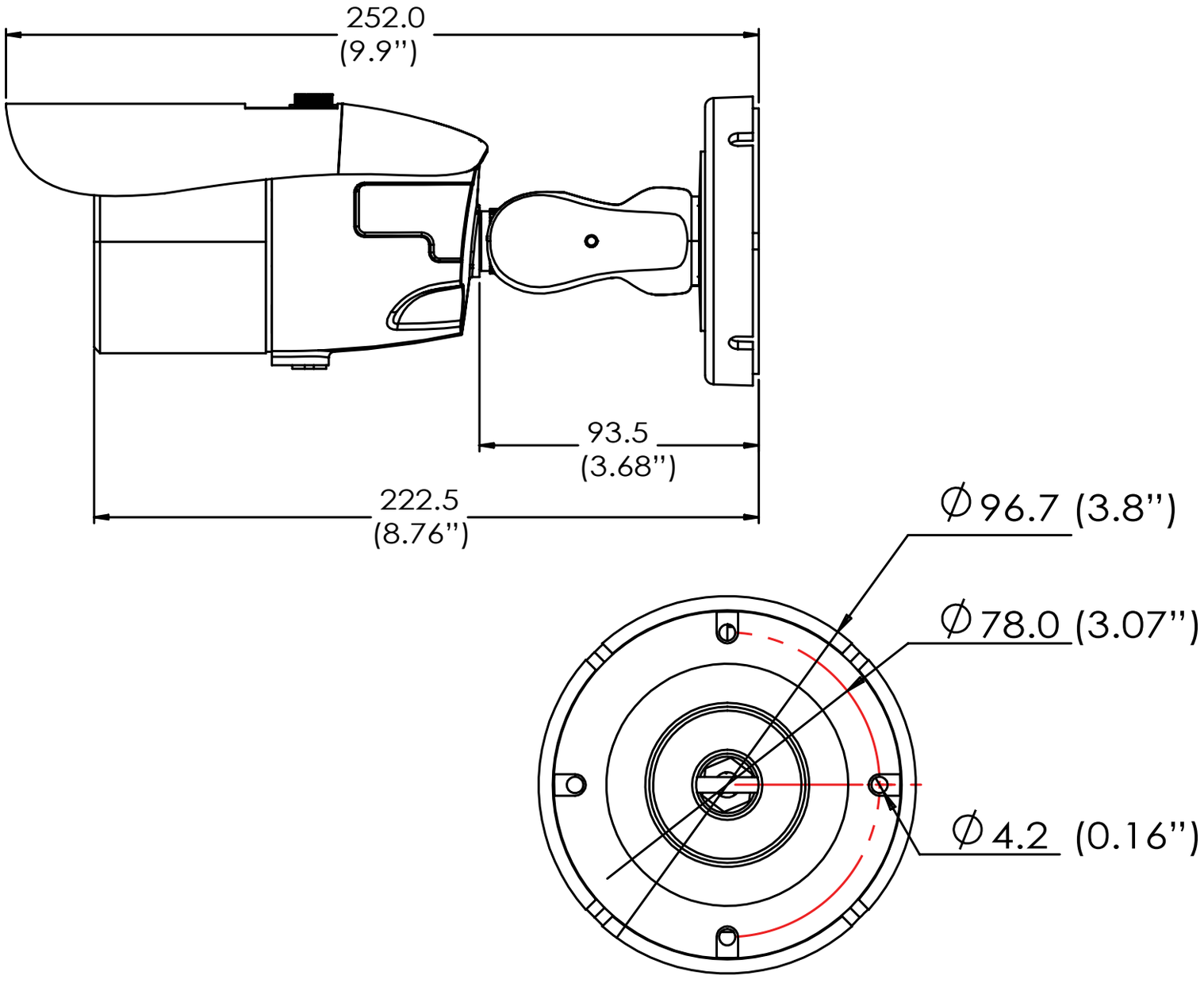
DIMENSIONS IN MILLIMETERS (IN)*

DWC-B6763WTIR



DIMENSIONS IN MILLIMETERS (IN)*

DWC-B6763WTIR650

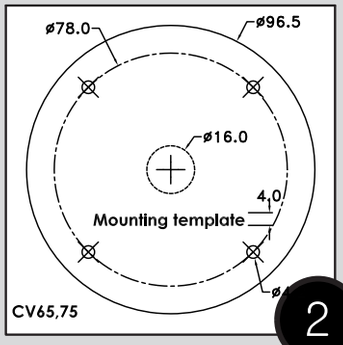


INSIDE THE BOX*

Included with Bullet Camera:

1. User Manual
2. Mounting Template
3. 4 Machine Screws and 4 Dry Wall Anchors
4. Secondary Video-BNC Cable
5. L-Key
6. DC Plug Power Cable

1



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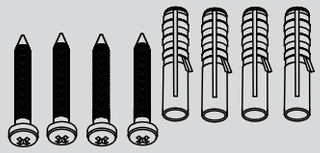
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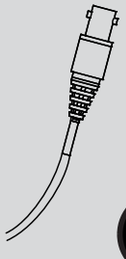
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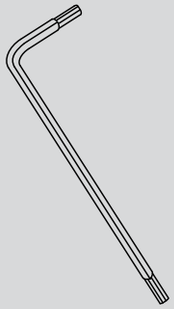
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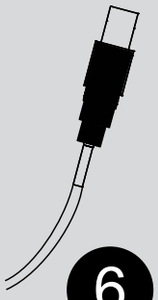
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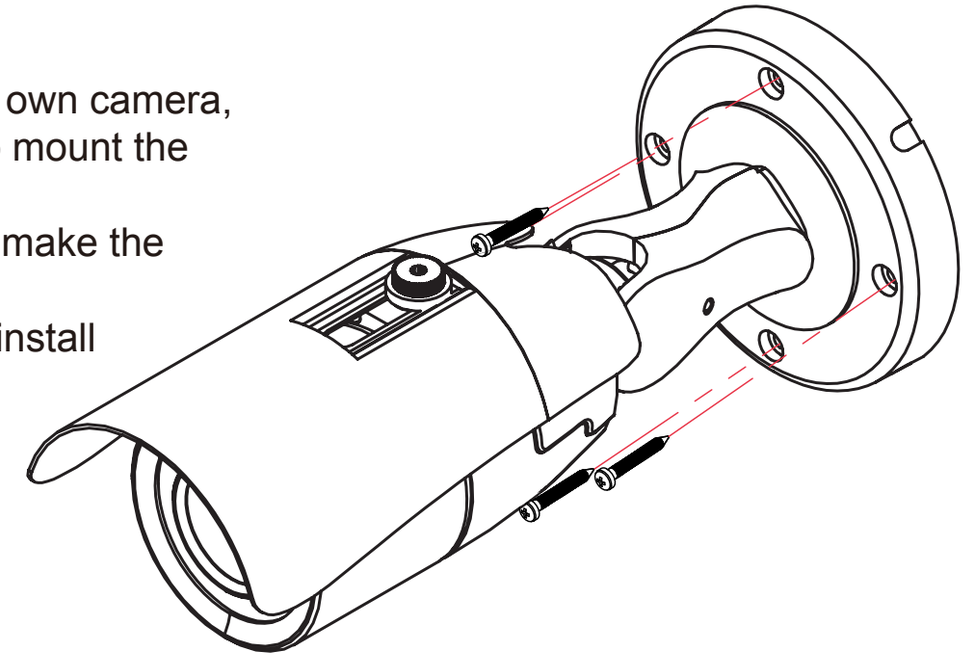
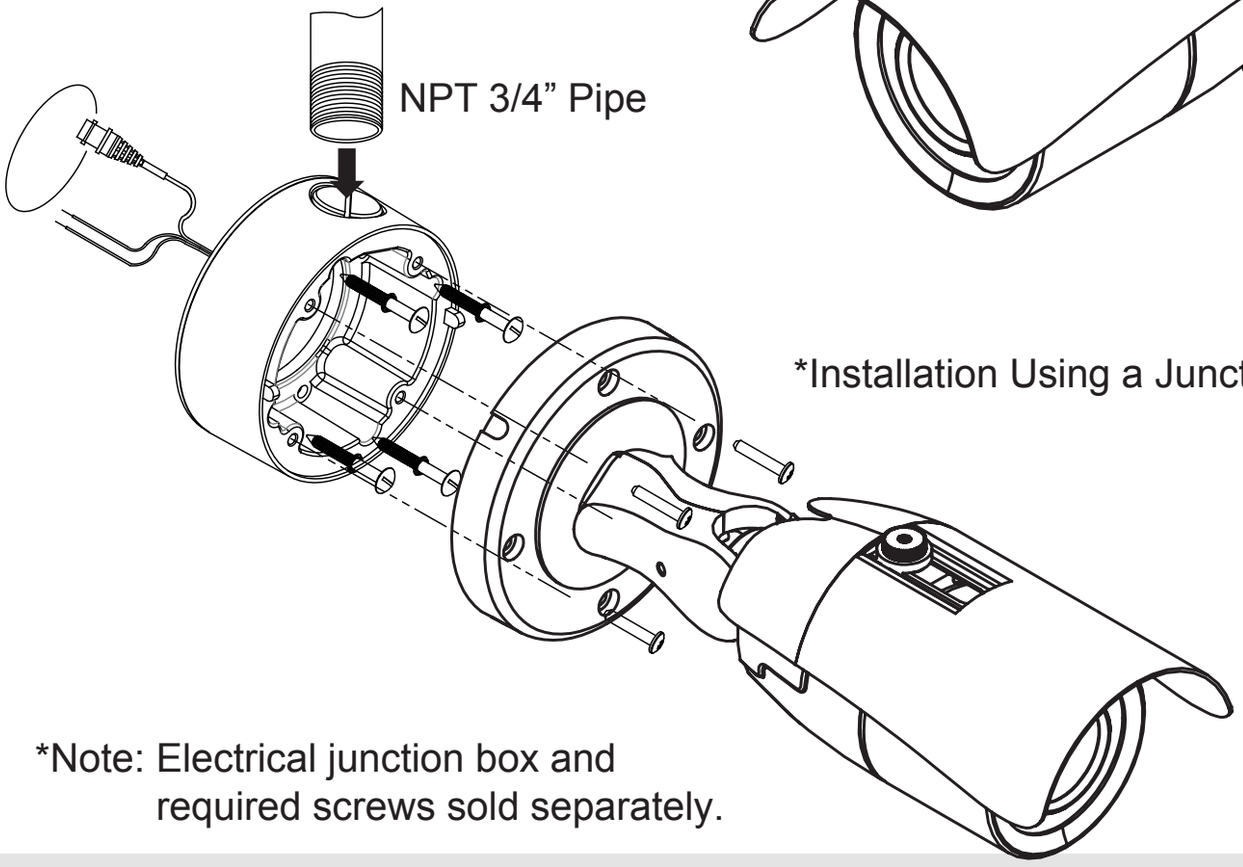
INSTALLATION INSTRUCTIONS*

1. Using the mounting template or your own camera, mark and drill the necessary holes to mount the bracket to a wall or ceiling.
2. Pull all necessary wires through and make the proper connections.
3. Use the four (4) mounting screws to install the camera on the wall or ceiling.



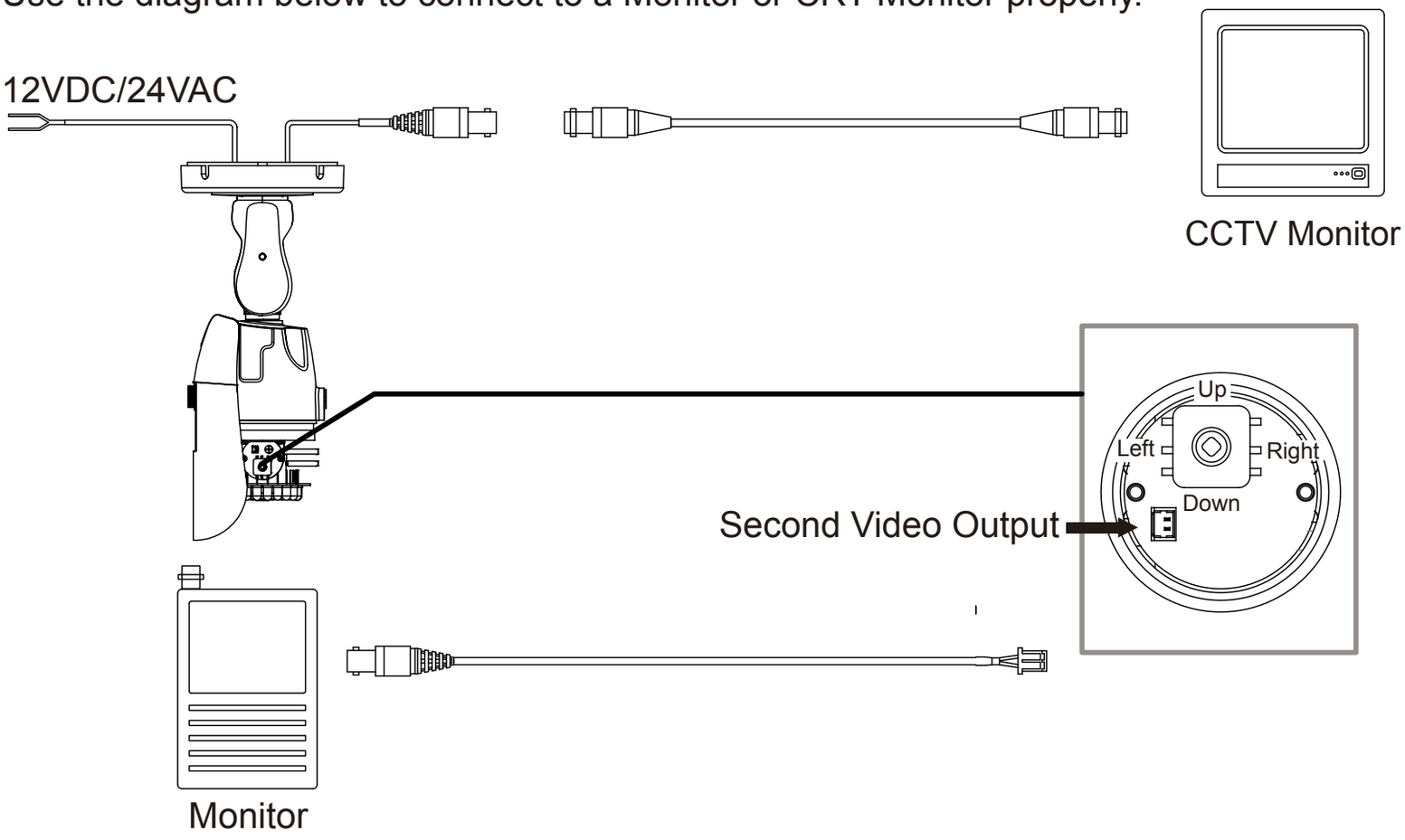


*Installation Using a Junction Box

*Note: Electrical junction box and required screws sold separately.

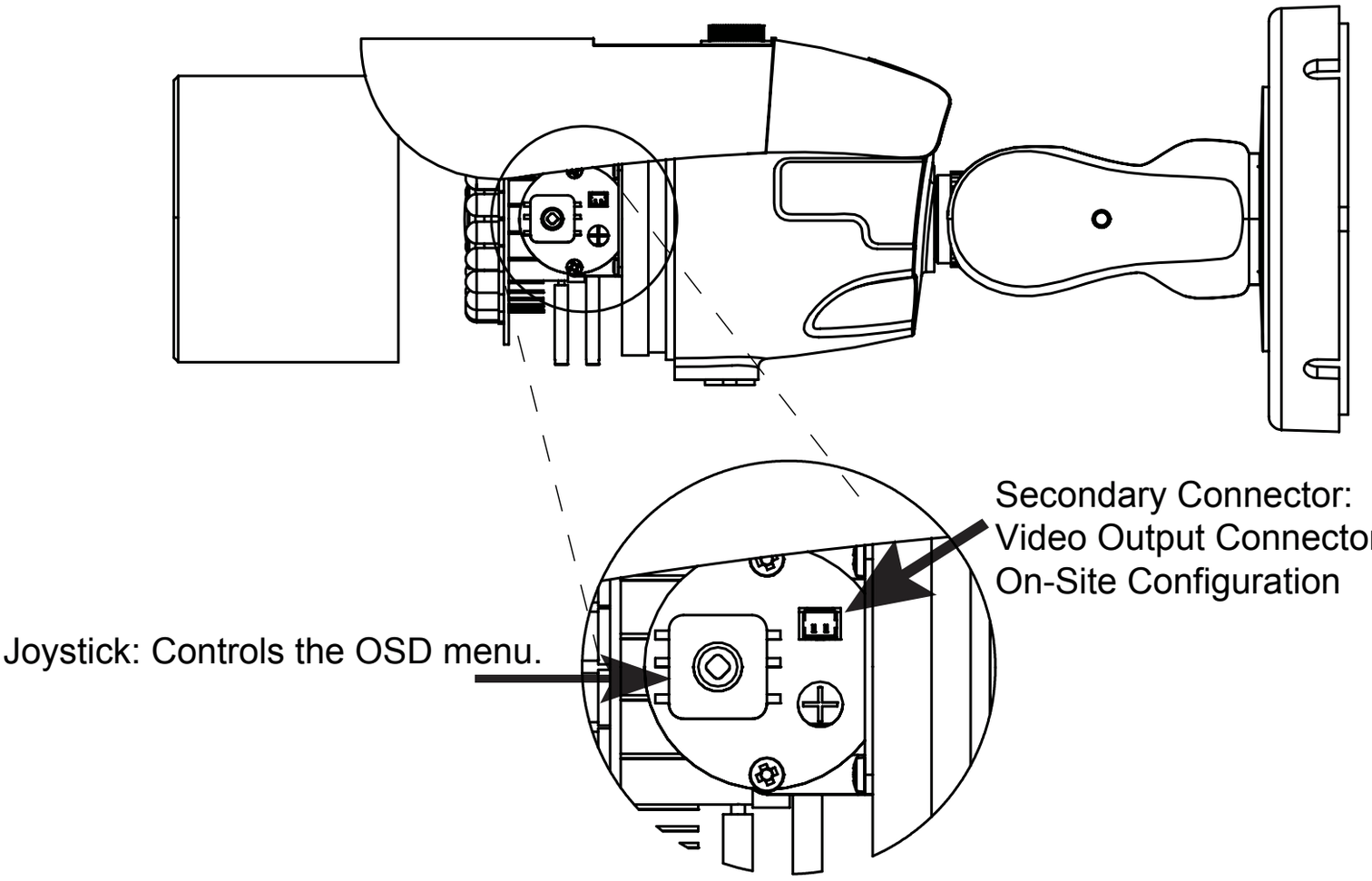
CONNECTING TO MONITORS*

Use the diagram below to connect to a Monitor or CRT Monitor properly.



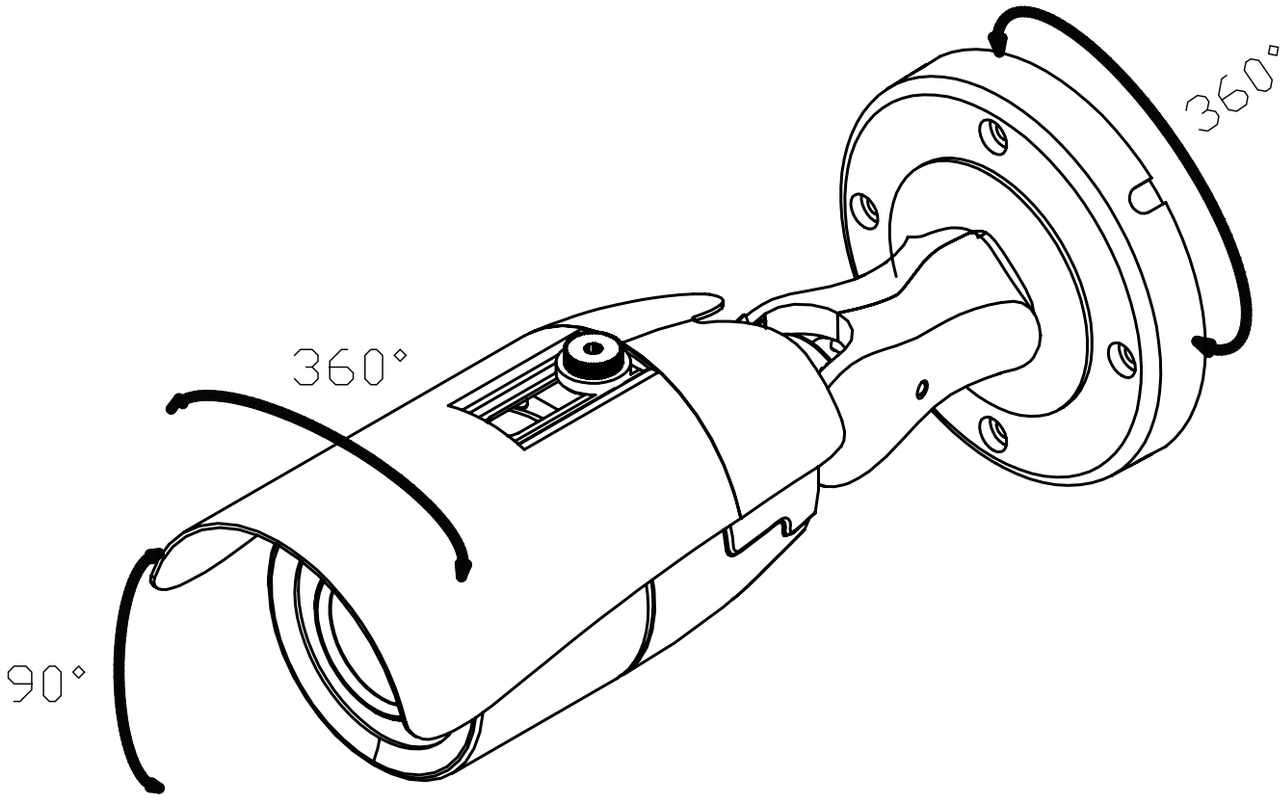
- Power Connection - 12VDC/24VAC Dual Voltage (Auto Polarity Detection and Protection)
- All cameras are equipped with a second video output for on-site configuration.

CONTROL BOARD*



1. Remove the camera's lens cover by rotating it counter-clockwise.
2. Use the Joystick to control the camera's OSD options.

ADJUSTING THE CAMERA ANGLE*



CAUTION :

❶ Do not rotate more than 360º.

❷ Do not unnecessarily twist too many times.

MODULE OSD MENU*

EXPOSURE	COLOR	DAY & NIGHT	FUNCTION
LENS MANUAL / AUTO BACKLIGHT OFF / HME / BLC / WDR DRC OFF / LOW / MIDDLE / HIGH DEFOG OFF / ON AGC 0~10 STARLIGHT OFF / x2 ~ x32 3D DNR OFF / LOW / MIDDLE / HIGH EXIT JUMP SAVE & EXIT / EXIT	WB BAL. AUTO / AUTO-EX / PRESET / MANULAL COLOR GAIN 0 ~ 20 EXIT JUMP SAVE & EXIT / EXIT	D&N MODE AUTO / COLOR / BW / EXTERN AGC THRES 0 ~ 20 AGC MARGIN 0 ~ 20 EXT LED OFF / AUTO DELAY LOW / MIDDLE / HIGH SMART IR 0 ~ 20 EXIT JUMP SAVE & EXIT / EXIT	SHARPNESS 0 ~ 10 GAMMA 0.45 ~ 0.75 MIRROR OFF / ON FLIP OFF / ON D. ZOOM x1.0 ~ x16.0 EXIT JUMP SAVE & EXIT / EXIT
MOTION	**PRIVACY**	**SETUP**	**EXIT**
MOTION OFF / ON DET. WINDOWS SENSITIVITY 0 ~ 10 MOTION OSD OFF / ON TEXT ALARM OFF / ON SIGNAL OUT OFF / ON EXIT JUMP SAVE & EXIT / EXIT	BOX OFF / ON POLYGON OFF / ON EXIT JUMP SAVE & EXIT / EXIT	COMMUNICA. CAM TITLE OFF / ON IMAGE RANGE FULL / COMP / USER FRAME RATE 720_50P/60P / 720_25P/30P / 1080_25P/30P FREQUENCY 50Hz / 60Hz LANGUAGE ENG / CHN / CHN (S) / JPN / KOR DEFECT DET ON INITIAL ON EXIT JUMP SAVE & EXIT / EXIT	SAVE RESTORE EXIT

EXPOSURE

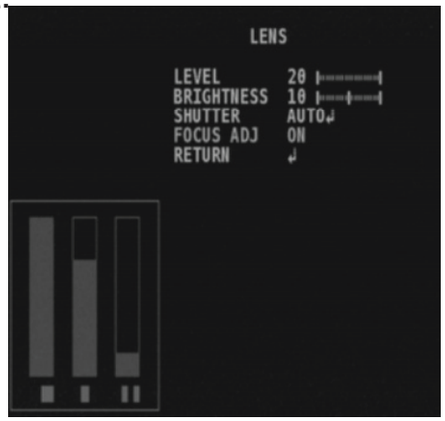
LENS

MANUAL/ Manual mode supports the fixed board lens or the manual iris lens.

AUTO AUTO mode sets the camera's iris automatically.

- Level: Change the camera's iris value manually. If AUTO is selected, this option is disabled.
- Brightness: Adjust the camera's brightness from 0~20. The higher the number, the brighter the image will appear.

- Shutter: Set the shutter speed to AUTO, Manual, or FLC (Flicker-less mode).
  - If AUTO is selected, select from the following options:
    - NORMAL: Set when the camera is installed in an indoor environment.
    - DEBLUR: Set when the camera is installed in an outdoor envirnment.
  - Select FLC if the camera is experiencing some flickering in the image. The shutter speed will be set to 1/100 for NTSC, or 1/120 for PAL.
  - If Manual is selected, set the shutter speed from the options: 1/30, 1/60, 1/120 ~ 1/30000.
- Focus Adjustment: When on, the default level is set automatically by controlling lens focus and based on the installation and environment circumstances.



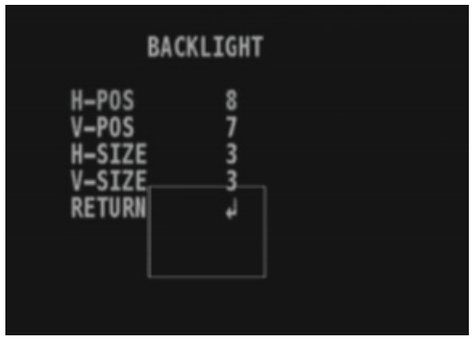
EXPOSURE

BACKLIGHT
OFF
HME **HIGHLIGHT MASKING EXPOSURE**

HME allows objects to appear clearly on the screen by masking extremely bright areas. To setup HME, set the level and color. The lower the setting, the darker the masking areas have to be. Select from: 0 ~ 10.
Color: Set the color of the HME mask. Select from: BLACK / WHITE / YELLOW / CYAN / GREEN / MAGENTA / RED / BLUE

BLC **BACK LIGHT COMPENSATION**

If BLC is selected, adjust the size nad position of the mask:
- H-POS: Move the Zone position left or right. The higher the number, the zone will move to the right.
- V-POS: Move the Zone position up or down. The higher the number, the zone will move down.
- H-Size: Reset the zone‘s size horizontally. The higher the number, the right side panel will move further to the right.
- V-Size: Reset the zone’s size vertically. The higher the number, the bottom side panel will move further down.



WDR **Wide Dynamic Range**

If WDR is selected, adjust the WDR level (Weight) in the submenu. Select from Low, Middle, or High (Default).

EXPOSURE

DRC **DYNAMIC RANGE COMPRESSOR**

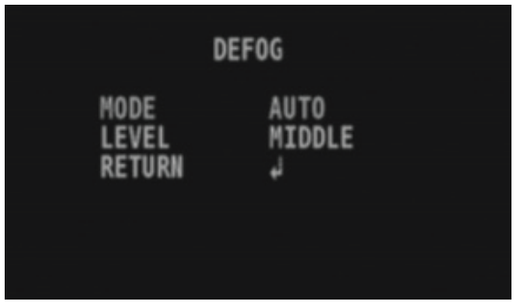
DRC enables dark areas in images to become more visible without overexposing the bright areas to create one perfect image. Select from: OFF / ON.

NOTE: If WDR or DEFOG are enabled, the DRC settings are set automatically and will not be available for adjustment.

DEFOG Allows the camera to process a scene that is obscured by fog or weather conditions and provides a visibly improved image.

AUTO / Manual: Select AUTO to have the WDR and DRC levels adjusted automatically.

Set the DEFOG level from LOW / MIDDLE / HIGH.



AGC **AUTO GAIN CONTROL**

0~10 AGC enhances the picture brightness in low light conditions. A higher level AGC setting makes the images brighter; however, it could increase the amount of noise.

STARLIGHT Automatically activates slow shutter function when the image is too dark.

OFF / x2 ~ x34 High values are not recommended as they may causes the image to lag.

(Default: X4) Starlight menu cannot be controlled if the SHUTTER setting is above 1/60.

3D DNR **3D DIGITAL NOISE REDUCTION**

OFF/ LOW/ MID/ HIGH 3D-DNR reduces the noise on the screen in low light conditions and allows for clearer images, even at night.

COLOR

WB MODE

ATW Auto Tracking White Balance Control mode compensates for color temperature changes between 2400K° and 11000K°.

AWB Auto White Balance Control mode compensates for color temperature changes lower than 2000K° and higher than 15000K°.

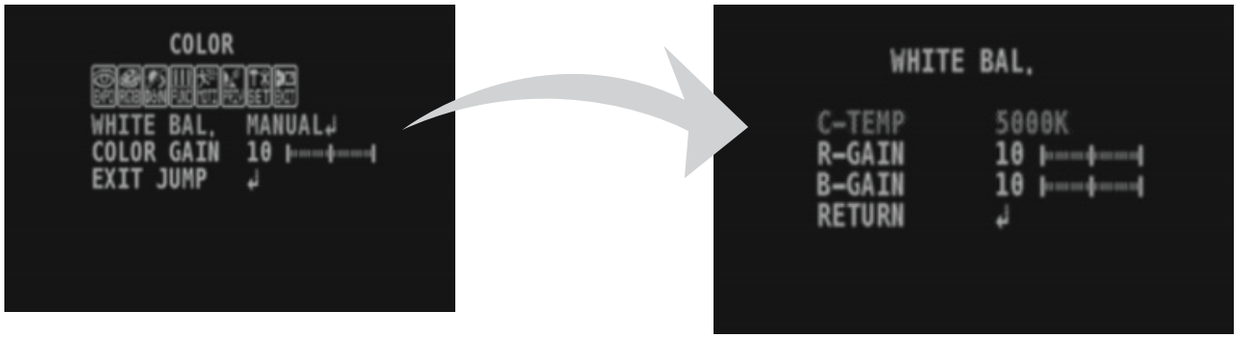
PUSH Push fixes the white balance based on the current lighting automatically.

MANUAL Users can control the white balance manually by changing RED GAIN and BLUE GAIN (see below).

C-TEMP: Select the color temperature for the white balance setup. If enabled, the Red and Blue Gain settings will be set automatically according to the C-TEMP selected.

RED GAIN: 0 ~ 20. Adjusts the amount of red in the image.

BLUE GAIN: 0 ~ 20. Adjust the amount of blue in the image.



COLOR GAIN

Set the color gain from 0~20.

DAY & NIGHT

D&N MODE

AUTO / Day/ Night switch will be based on the AGC levels.
COLOR / The camera always stays in day/color mode.
B&W The camera always stays in night/B&W mode.
EXTERN Day/ Night switch will be based on using IR LED lights.

AUTO:
- AGC Threshold: Set when the camera switches between Day & Night.
- AGC Margin: Set the value added to the AGC Threshold. Adjust the value based on the environment in which the camera is installed. If the margin is too low, the camera will switch from color to B/W and back.

EXT.:
- CDS Threshold: Marks the light level at which the camera will switch between color and B/W. The lower the value, the camera will require less light (more darkness) to switch to Night Mode.
- CDS Margin: The value added to the CDS Threshold. Adjust this based on the environment in which the camera is installed. If the margin is too low, the camera will switch from color to B/W and back.

EXT LED

AUTO / AUTO: The LEDs are enabled/ disabled by the CDS Sensor on the LED Board.
OFF OFF: The camera's LEDs are disabled manually.

DELAY

Low/Mid/High Time interval delay before switching from day mode to night mode.

SMART IR

0 ~ 20 Enable Smart IR and set the level. Higher values will make Smart IR stronger.

FUNCTION

SHARPNESS

0 ~ 10 Sets the image sharpness. The higher the number, the sharper the image.

GAMMA

0.45 ~ 0.75 Select the desired gamma level. 0.55 is default setting.

MIRROR / FLIP

OFF

MIRROR Reflects the camera horizontally.

FLIP Reflects the camera vertically.

Mirror / Flip OFF

Mirror ON

Flip ON

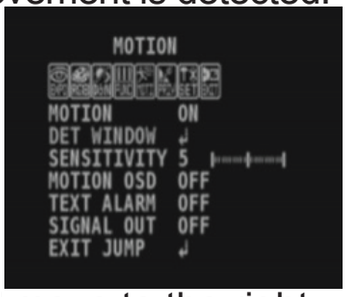
Mirror & Flip ON

D-Zoom

x1 ~ x16 Enable or Disable Digital zoom to the camera's field of view. By default, the zoom will go to the center of the camera's Field of View.

MOTION

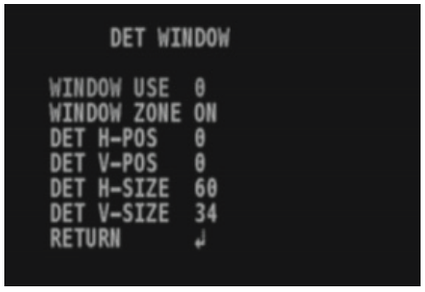
The camera can detect the movement and display an alarm on the screen when movement is detected.



MOTION To use the motion detection settings, be fore Motion is ON.

DET. WINDOW

- Window Use: Select which zone to setup from the 4 motion zones available.
- Window Zone: Enable or disable the selected motion zone.
- DET H-POS: Move the Zone left or right. The higher the number, the zone will move to the right.
- DET V-POS: Move the Zone up or down. The higher the number, the zone will move down.
- DET H-Size: Adjust the zone‘s size horizontally. The higher the number, the right side panel will move further to the right.
- DET V-Size: Adjust the zone’s size vertically. The higher the number, the bottom side panel will move further down.



SENSITIVITY

The smaller the movement you want to detect, the higher the sensitivity value must be.

MOTION OSD

If enabled, the text MOTION ZONE will appear on the screen indicating the area of motion detection.

TEXT ALARM

Setup a text to appear on the screen when motion is detected explaining the alarm situation.

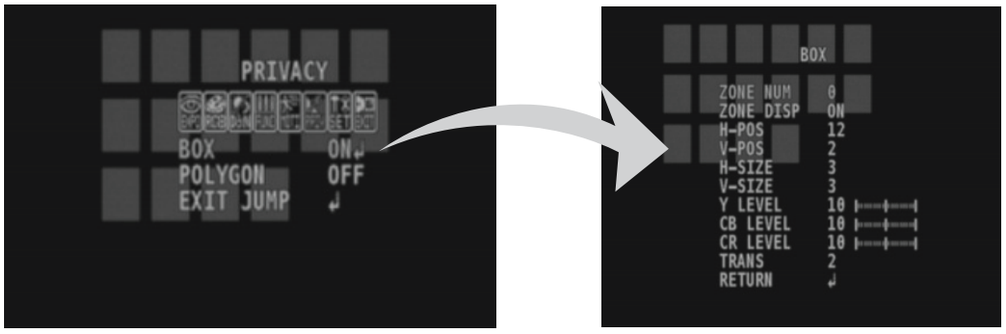
- WINDOW MOTION: Wiil appear when a motion alarm is detected.
- CAMERA MOVING: Will appear if the camera is shaken abruptly.
- BRIGHT CHANGE: Will appear if the brighness in the scene changes suddenly and drstically.

SIGNAL OUT

If enabled, the camera can trigger an output when motion is detected.

PRIVACY

You can hide some parts of the screen for privacy masking. A total of 8 different privacy masking zones are available. The cameras support square privacy masks or advanced polygon masks.

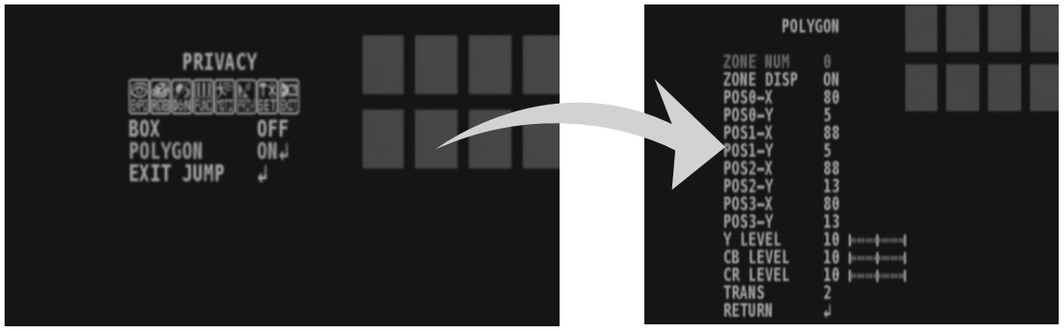


BOX MASKS

- ZONE NUM.: Select the zone number you want to setup.
- ZONE DISP.: To enable it, turn the display option ON.
- H-POS: Move the Zone position Left or right. The higher the number, the zone will move to the right.
- V-POS: Move the Zone position up or down. The higher the number, the zone will move down.
- H-SIZE: Reset the zone‘s size horizontally. The higher the number, the right side panel will move further to the right.
- V-SIZE: Reset the zone’s size vertically. The higher the number, the bottom side panel will move further down.
- Y LEVEL- The higher the number, the brighter the color will appear.
- CR LEVEL- The higher the number, the more red tone will be added to the zone’s color. The lower the number, the more green will be added to the zone’s color.
- CB LEVEL- High CB Level + High CR Level = Red
  High CB Level + Low CR Level = Blue
  Low CB Level + High CR Level = Orange

PRIVACY

You can hide some parts of the screen for privacy masking. A total of 8 different privacy masking zones are available. The cameras support square privacy masks or advanced polygon masks.



POLYGON MASKS

- ZONE NUM.: Select the zone number you want to setup.
- ZONE DISP.: To enable it, turn the display option ON.
-POS0-X: Move the mask's upper left angle left to right.
-POS0-Y: Move the mask's upper left angle up and down.
-POS1-X: Move the mask's upper right angle left to right.
-POS1-Y: Move the mask's upper right angle up and down.
-POS2-X: Move the mask's lower right angle left to right.
-POS2-Y: Move the mask's lower right angle up and down.
-POS3-X: Move the mask's lower left angle left to right.
-POS3-Y: Move the mask's lower left angle up and down.
- Y LEVEL- The higher the number, the brighter the color will appear.
- CR LEVEL- The higher the number, the more red tone will be added to the zone's color. The lower the number, the more green will be added to the zone's color.
- CB LEVEL- High CB Level + High CR Level = Red
High CB Level + Low CR Level = Blue
Low CB Level + High CR Level = Orange

SETUP

COMMUNICATION

Adjust the camera's ID and Baudrate. Default Protocol is Pelco-D.
- CAM ID: Provide an ID number for the camera (0 ~ 255).
- BAUDRATE: 9600bps is default. Select the baudrate from the following options: 2400/4800/9600/57600/115200 bps.

CAM. TITLE

Add a name to the camera. Set the title by using the OSD joystick.

IMAGE RANGE

Image Range allows you to set the proper Black and White levels according to the external display you use.
FULL: Display all BLACK level and WHITE level without compression.
COMP: Display BLACK level and WHITE level with compression.
USER : Reset the BLACK level by changing the OFFSET value.

SETUP

FRAME RATE

Set the camera's display frame rate and resolution. Select from: 720-30P, 720-60P, 1080-30P. The camera may have to be rebooted after frame rate change.

FREQUENCY

When the camera's image appears to have flickering issues, change the frequency value to adjust the image.

LANGUAGE

Select from the following: English (Default), Chinese, Chinese (S), Japanese, and Koran.

DEFECT DET.

The camera can detect and correct dead pixels in the image. Press the select button and set the threshold level. The camera will detect and adjust the pixels automatically.

INITIAL

Reset the camera to its default settings. Press and hold the select button for five (5) seconds.

EXIT

EXIT

SAVE Exit the OSD menu after saving the recent changes.

INITIAL Exit the OSD menu after resetting the camera to factory default.

TROUBLESHOOTING

Before sending your camera for repair, check the following or contact our technical specialist.

FOR NO VIDEO

Check the coaxial cable and make sure it is connected securely.
Check the lens' iris adjustment at the camera's OSD menu.
Check the power supply and make sure the camera has the proper voltage and current.

FOR OUT-OF-FOCUS VIDEO

Check the clear dome cover and the lens for dirt or fingerprints. Use a soft cloth and gently clean. Check the lens' manual focal and zoom adjustment. The use of a field test monitor is recommended.

WARRANTY INFORMATION*

Digital Watchdog (referred to as “the Warrantor”) warrants the Digital Watchdog Camera against defects in materials or workmanship as follows:

LABOR: For the initial five (5) years and one (1) year on IR LED from the original purchase date, if the camera is determined to be defective, the Warrantor will repair or replace the unit with a new or refurbished product at its option at no charge.

PARTS: In addition, the Warrantor will supply replacement parts for the initial five (5) years and one (1) year on IR LED.

To obtain warranty or out of warranty service, please contact a Technical Support Representative at **1-866-446-3595** Monday through Friday from 9:00AM to 8:00PM Eastern Standard Time.

A purchase receipt or other proof of the original purchase date is required before warranty service is rendered. This warranty only covers failures due to defects in materials and workmanship which arise during normal use. This warranty does not cover damage which occurs in shipment or failures which are caused by products not supplied by the Warrantor or failures which result from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, modification, faulty installation, set-up adjustments, improper antenna, inadequate signal pickup, maladjustment of consumer controls, improper operation, power line surge, improper voltage supply, lightning damage, rental use of the product or service by anyone other than an authorized repair facility or damage that is attributable to acts of God.

LIMITS & EXCLUSIONS*

There are no express warranties except as listed. The warrantor will not be liable for incidental or consequential damages (including damage to recording media without limitation) resulting from the use of these products or arising out of any breach of the warranty. All express and implied warranties, including the warranties of merchantability and fitness for particular purpose, are limited to the applicable warranty period set forth above.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitatons on how long an implied warranty lasts, so the exclusions or limitations listed above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state-to-state.

If the problem is not handled to your satisfaction, then write to the following address:

Digital Watchdog, Inc.
ATTN: RMA Department
5436 W. Crenshaw Street
Tampa, FL 33634

Service calls which do not involve defective materials or workmanship as determined by the Warrantor, in its sole discretion, are not covered. Costs of such service calls are the responsibility of the purchaser.

SPECIFICATIONS*

VIDEO	
Image Sensor	Panasonic 1/3" CMOS
Active Pixels	1944(H) x 1092(V)
Scanning System	Progressive scan
Frequency	60Hz/50Hz
Signal Technology	2.0 Megapixel AHD
Synchronization	Internal
Resolution	1920x1080 (1080p)
Minimum Scene Illumination	F1.4 (30IRE): 0.35Lux [Color]
	F1.4 (30IRE): 0 Lux [B&W]
S/N Ratio	55dB
Video Output	AHD 1080p30fps/720p60fps/720p30fps
Alarm Output	1 Alarm Output
LENS	
Focal Length	2.8 ~ 12mm, 6 ~ 50mm [B6763WTIR650]
Lens Type	Vari-Focal
	P-Iris
IR Distance	100ft [B6763WTIR], 150ft [B6763WTIR650]
OPERATIONAL	
Shutter Speed	1/30(25)-1/30,000
Backlight	Off/ On
STAR-LIGHT	OFF, x2 -x32
Wide Dynamic Range (WDR)	Off/ On

SPECIFICATIONS*

OPERATIONAL (CONT.)		
Digital Noise Reduction		Off, Low, Middle, High
White Balance		Auto / Auto-Ex/ Preset / Manual
Day and Night		Day/ Night/ Auto
Auto Gain Control		Max 60dB
Privacy Zones		16 Privacy Zones
RS485/ UTP Built-in		PELCO D/PELCO C
Digital Zoom		x1.0 ~ x16.0
ENVIRONMENTAL		
Operating Temperature		-20°C ~ 50°C (-4°F ~ 122°F)
Operating Humidity		No more than 90% (Non-Condensing)
IP Rating		IP66 (Weather Resistant)
Other Certifications		FCC, CE, ROHS
ELECTRICAL		
Power Requirements		DC12V/AC24V Dual Voltage
Power Consumption	B6763WTIR	DC12V: 3.1W, 258mA, LED On: 4.36W, 363mA
		AC24V: 3.12W, 130mA, LED On: 4.4W, 183mA
	B6763WTIR650	DC12V: 3.17W, 264mA, LED On : 4.95W, 412mA,
		AC24V: 3.12W, 130mA, LED On: 4.87W, 202mA
MECHANICAL		
Housing Material and Dimensions		Aluminum, 234.5 x 82.2 mm (9.23 X 3.23 in)
Weight		1.65lbs

*Specification is subject to change without prior notice.

MEMO*

DW DIGITAL WATCHDOG®

Complete Surveillance Solutions

5436 W Crenshaw St. Tampa, FL 33634
Tel : 866-446-3595 / 813-888-9555
Fax : 813-888-9262
www.Digital-Watchdog.com
technicalsupport@dwcc.tv
Technical Support Hours : Monday-Friday
9:00am to 8:00pm EST